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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,034	09/18/2006	Masaki Ninomiya	R2184.0494/P494	4395
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EXAMINER				
CHU, KIM KWOK				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/579,034

Applicant(s)

NINOMIYA ET AL.

Examiner

Kim-Kwok CHU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on May 10, 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

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35 U.S.C. 101 Rejection

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 16-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In each of the independent Claims 16-18, Applicant claims a computer-readable storage medium. In these Claims, the broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. See MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal per se, the claim must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter. See *In re Nuijten*, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101, Aug. 24, 2009; p. 2.

The USPTO recognizes that applicants may have claims directed to computer readable media that cover signals per se,

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which the USPTO must reject under 35 U.S.C. § 101 as covering both non-statutory subject matter and statutory subject matter. In an effort to assist the patent community in overcoming a rejection or potential rejection under 35 U.S.C. § 101 in this situation, the USPTO suggests the following approach. A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation "non-transitory" to the claim. Cf. *Animals - Patentability*, 1077 Off. Gaz. Pat. Office 24 (April 21, 1987) (suggesting that applicants add the limitation "non-human" to a claim covering a multi-cellular organism to avoid a rejection under 35 U.S.C. § 101). Such an amendment would typically not raise the issue of new matter, even when the specification is silent because the broadest reasonable interpretation relies on the ordinary and customary meaning that includes signals per se.

The limited situations in which such an amendment could raise issues of new matter occur, for example, when the specification does not support a non-transitory embodiment because a signal per se is the only viable embodiment such that the amended claim is impermissibly broadened beyond the

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supporting disclosure. See, e.g., Gentry Gallery, Inc. v. Berkline Corp., 134 F.3d 1473 (Fed. Cir. 1998).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) in Claim 1, the preamble of the claim is to determine an optimum recording power value (lines 1 and 2). However, the body of the claim recites steps of recording information and its recording position in each recording layer. Therefore, it is not clear how the recording position can be used to determine the optimum recording value.

Similarly, in each of independent Claims 2, 3, 5, 9, 10, 11, 16, 17 and 18, the preamble of the claim is to determine an optimum recording power value but the body of the claim recites steps of recording information and its recording position in each recording layer. Therefore, it is not clear how the

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recording position can be used to determine the optimum recording value.

The claims not specifically mentioned above are indefinite based upon their dependence on an indefinite claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

6. Claims 1-15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Narumi et al. (U.S. Patent 7,376,058).

7. Narumi teaches a recording method having all of the steps as recited in claim 1. For example, Narumi teaches the following:

Regarding Claim 1, the recording method which determines an optimum recording power value by performing test writing on a test zone 126/136 (Fig. 6) of a recording medium 600 and records information on the recording medium with the determine optimum recording power (Fig. 6; column 2, lines 4-22), wherein the recording medium 600 is a multilayer recording medium having

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a plurality of recording layers 120/130 within one recording surface (one recording surface having two recording layers); the test zone is formed on each recording layer (Fig. 6; test zone 126 for layer 120; test zone 136 for layer 130); and when information (data) is to be recorded on a target recording layer 130 that is second or further from a light source (layer 130 is the second layer further away from the incident light beam), information is recorded on a portion 137, which portion 137 is positioned in a same recording surface area as that of the test zone 126, of an upper recording layer 120 that is closer to the light source than the target recording layer 130 before the test writing is performed on the test zone 136 in the target recording layer 130 (Fig. 6; updating test zone 136 after data is recorded in second layer 130).

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8. Narumi teaches a recording apparatus having all of the elements and means as recited in claims 9 and 13-15. For example, Narumi teaches the following:

Regarding to Claim 9, the recording apparatus (Fig. 9) which determines an optimum recording power value by performing test writing on a test zone of a recording medium and records information on the recording medium 800 (Fig. 9) with the determined optimum recording power, wherein the recording medium is a multilayer recording medium having a plurality of recording layers 120, 130 (Fig. 6) within one recording surface and the test zone 126, 136 (Fig. 6) is formed on each recording layer, comprising: a preprocessing unit 901/902 (Fig. 9) which, when recording information on a target recording layer 130 that is second or further from a light source (Fig. 6), records information (data) on a portion 137, which portion is positioned in the same recording surface area as that of the test zone 1136 in the target recording layer 130 (areas 136 and 137 are within the same layer 130), of an upper recording layer 120 that is closer to the light source than the target recording layer 130 (Fig. 6; portion 137 is same position of 126); and a test writing unit 902 which, after the recording on the upper recording layer, performs the test writing on the test zone in the target recording layer 130 (Fig. 6; updating test zone 136

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after data is recorded in second layer 130).

Regarding Claim 13, the preprocessing unit 901/902 (Fig. 9) in the information recording on the upper recording layer 120 (Fig. 6) closer to the light source than the target recording layer 130 before the test writing on the target recording layer 130, records information only on a portion 137, which portion 137 is used to perform the test writing once, of the test zone 126 in the upper recording layer 126 (Fig. 6); and the test writing unit 902 (Fig. 9) performs the subsequent test writing for the target recording layer 130 on another portion 136 (Fig. 6), which other portion 136 is positioned in a same recording surface area as that of the portion, of the test zone in the target recording layer 130 (Fig. 6).

Regarding Claim 14, the preprocessing unit 901/902, in the information recording on the upper recording layer 120 closer to the light source than the target recording layer 130 (Fig. 6) before the test writing on the target recording layer, records information on an entire area of the test zone in the upper recording layer.

Regarding Claim 15, the preprocessing unit 901/902 (Fig. 9), after recording information on the upper recording layer 120 (Fig. 6) closer to the light source than the target recording layer 120 before the test writing on the target recording layer,

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records indicator information (ROM) indicating a zone where the information has been recorded in a count zone (ROM; disc management data) of the recording medium.

9. Method claims 2 and 4 are drawn to the method of using the corresponding apparatus claimed in claims 9 and 13. Therefore method claims 2 and 4 correspond to apparatus claims 9 and 13 and are rejected for the same reasons of anticipation as used above.

10. Method claim 3 is drawn to the method of using the corresponding apparatus claimed in claims 9 and 13. Therefore method claim 3 corresponds to apparatus claims 9 and 13 and is rejected for the same reasons of anticipation as used above.

11. Claims 5-8 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above.

12. Claims 10 and 12 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above.

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13. Claim 11 has limitations similar to those treated in the above rejection, and is met by the reference as discussed above.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 16-22 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Narumi et al. (U.S. Patent 7,376,058) in view of Adachi et al. (U.S. Patent 7,027,370).

Narumi teaches an apparatus for determining an optimum recording power value very similar to that of the present invention. However, Narumi does not teach the following:

Regarding Claim 16, a computer-readable storage medium having a program embodied therein for causing a computer, which makes a recording apparatus determine an optimum recording power value.

Adachi teaches the following: a computer-readable storage medium having a program embodied therein for causing a computer,

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which makes a recording apparatus determine an optimum recording power value (Fig. 1; column 14, lines 32-43).

An optimum laser power calibration operation such as Narumi's is controlled by a program/routine written inside a processing unit 901. However, when there is a need to alter the power calibration under new operation modes, the embedded program/routine has to be rewritten. In this case, it would have been obvious to one of ordinary skill in the art to replace Narumi's internal program/routine with Adachi's program written in a computer-readable storage medium, because Adachi's program stored in a storage medium is transferrable and can be updated/modified easily.

16. Claims 17 and 19 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above.

17. Claim 18 has limitations similar to those treated in the above rejection, and are met by the reference as discussed above.

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18. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/Kim-Kwok CHU/
Examiner AU2627
June 14, 2010
(571) 272-7585

/HOA T NGUYEN/

Supervisory Patent Examiner, Art Unit 2627